Taiwanese Patent Publication No. 130638

The present utility model relates to a direction control device for a ratchet wrench. More particularly, the direction control device includes upper and lower plates (2; 3) attached to a body (1) by means of a bolt (121) so as to retain a toothed wheel 4 and a pawl (5) in an end of the body (1). The body (1) defines a long recess (13) in which a driver (6) is pivotally put. The driver (6) defines a countersink hole (61) in upper and lower ends and two square holes (63) beside a central rotational shaft (62) in order to receive two hooks (71) of a knob (7). The driver (6) includes a stop (65) extending from a rear end. A leaf spring 8 includes an end fit in a slit (51) defined in the pawl (5) and an opposite end fit in a slit (64) defined in the driver (6). Thus, as the knob (7) is rotated, the direction of the ratchet wrench (the pawl 5) is changed.

TRANSLATION OF OFFICE ACTION BY TAIWAN INTELLECTUAL PROPERTY OFFICE ON OPPOSITION TO PATENT APPLICATION No. 089200570 P01 IN TAIWAN

REASONS FOR REJECTION

1. The Subject Application entitled "RATCHET WRENCH (2)" was filed on Jan. 11, 2000 and allowed on Oct. 24, 2001. The patentability of the Subject Application was determined based on the applicable Patent Law and Rules amended and published on Jan. 21, 1994.

2. The Subject Application comprises a handle, a drive member, a pawl, a ring, a revering plate, retaining means, and a transmission member. A head having a compartment is formed on an end of the handle. The drive member has first and second ends located outside the compartment in the head, with an intermediate portion of the drive member being rotatably received in the compartment of the head. A first teeth portion and a second teeth portion are formed on a side of the pawl, wherein the first teeth portion has a center of curvature located in a position different from a center of curvature of the second teeth portion. Two circles respectively formed by the curvatures with different centers intersect with each other at a point. A line passing through the point and one of the centers of curvatures is at an acute angle smaller than 30 degrees with another line passing through the point and the other center of curvature. The ring is pivotally mounted around the first end of the drive member and has a portion connected to the pawl. The reversing plate is pivotally mounted around the first end of the drive member. The retaining means is received in an end of the reversing plate. The transmission member is extended through a notch (p.s.: the rectangular opening section 142) between the drive member and the head. By means of operating the reversing plate which causes pivotal movement of the

ring through the transmission member, the pawl slides to a desired position in which one of the first teeth portion and the second teeth portion is engaged with the drive member according to the ratcheting direction, thereby allowing reversible operation of the ratchet wrench (see the claims).

3. The opposition evidence II and the enclosure I (hereinafter together referred to as CITED REFERENCE 1) provided by the applicant initiating the opposition procedure are respectively the Patent Publication No. 212343 published on Sep. 1, 1993 and entitled "QUICK REPLACEMENT STRUCTURE FOR A D-SHAPED RATCHET WHEEL OF A RATCHET WRENCH" and a comparing figure containing an insert block of the Patent Publication No. 212343 and Fig. 2-4-1 of the Subject Application.

The evidence III (hereinafter referred to as CITED REFERENCE 2) provided by the applicant initiating the opposition procedure is Patent Publication No. 130638 published on Mar. 11, 1990 and entitled "DIRECTION ADJUSTABLE REVESING STRUCTURE FOR A RATCHET WRENCH."

The evidence IV (hereinafter referred to as CITED REFERENCE 3) provided by the applicant initiating the opposition procedure is Patent Publication No. 310649 published on Jul. 11, 1997 and entitled "IMPROVED CATCH TOOTH STRUCTURE FOR A RATCHET WRENCH."

The publication date of CITED REFERENCE 1 is earlier than the filing date of the Subject Application and includes a handle, an insertion block, a direction adjusting member, a C-shaped retainer ring, a spring, a steel ball, a D-shaped ratchet wheel, a compression spring, a positioning steel ball, a push rod, a returning member, and a positioning block. The head of the handle includes an axial through-hole. A side of the insertion block facing the D-shaped ratchet wheel includes ratchet teeth for forward ratcheting operation and ratchet

teeth for reverse ratcheting operation. The handle, D-shaped ratchet wheel, insertion block, and direction adjusting button correspond to the handle, drive member, pawl, and transmission member and reversing plate of the Subject Application. In the CITED REFERENCE 1, the direction adjusting member is used to move the insertion block, and the direction adjusting member is pivotally mounted around a first end of the D-shaped ratchet wheel and located outside the head. Thus, the technique of using the direction adjusting member to control engagement direction between the insertion block and the D-shaped ratchet wheel is identical to that of the Subject Application.

The publication date of CITED REFERENCE 2 is earlier than the filing date of the Subject Application and discloses a direction adjustable reversing structure for a ratchet wrench, wherein an upper plate and a lower plate are engaged by screws to a body, and a ratchet wheel and a catch are disposed in a through-hole in an end of the body. The catch having a first teeth portion and a second teeth portion corresponds to the pawl of the Subject Application.

The publication date of CITED REFERENCE 3 is earlier than the filing date of the Subject Application and discloses an improved catch tooth structure for a ratchet wrench, wherein the catch body having a first teeth portion and a second teeth portion corresponds to the pawl of the Subject Application.

The features of the Subject Application have been respectively disclosed in the CITED REFERENCES 1, 2 and 3. The high-torque reversing effects of the CITED REFERENCES 1, 2, and 3 are the same as that of the Subject Application. Thus, the Subject Application can be easily achieved by one skilled in the art and fail to provide improved effectiveness. Hence, the CITED REFERENCES 1, 2 and 3 are evidential, and the independent claims 1 and 2 do not posses improvement. Further, the specific shapes of the compartment, notch,

drive member, pawl, reversing plate, tip piece, positioning piece, and retaining means recited in dependent claims 3-15 of the Subject Application are simple application of prior art without providing improved effectiveness and therefore not possessing improvement.

In conclusion, the Subject Application fails to meet the requirement of Article 98, paragraph 2 of the applicable Patent Law.

經濟部智慧財產局專利異議審定書

受文者：胡厚飛　先生（代理人：林殷世　先生）

地　址：台中市北屯區崇德路二段一三〇號六樓A1

發文日期：中華民國九十一年五月十七日

發文字號：（九一）智專三（三）02045字第〇九一八九〇〇一二一一號

一、被異議案號數：〇八九二〇〇五七〇P〇一

二、被異議案名稱：棘輪扳手（二）

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七、異議日期：九十年四月十日

八、審查人員姓名：顏政雄　委員

九、審定主文：異議成立，應不予專利。

十、理由：

（一）系爭案「棘輪板手（二）」係於八十九年一月十一日申請專利，本局於九十年十月二十四日審定准予專利，則其有無應不予專利之原因，應以核准審定時所適用之八十三年一月二十一日修正公布之專利法規定為斷，合先說明。

（二）系爭案係由扳手、驅動體、換向塊、撥動裝置、控制鈕、固定裝置與撥接件等主要構件所組成，扳手一端固設具容置間的頭部；驅動體以第一、二端分別凸出於頭部容置空間之外，中段容置於容置空間形成樞固狀態；換向塊一側分別設有第一與第二齒面，各齒面由不同圓心所形成之兩個弧率，兩圓心形成之圓交於一點，且兩圓心與相交點所形成之夾角小於三十度，撥動裝置套合樞設於驅動體之第一端，一側連動換向塊；控制鈕樞設於驅動體第一端；固定裝置容置於控制鈕之一端；撥接件穿設過驅動體與扳手頭部間的缺口，藉操作控制鈕，利用撥接件連動撥動裝置之樞擺，帶動換向塊產生滑移，換向塊則依換向位置之不同分別以其第一或第二齒面與驅動體產生嚙合，達棘輪扳手具有換向操作之功能者（詳見申請專利範圍）。

（三）異議證據二與附件一分別為八十二年九月一日公告第二一二三四三號「棘輪扳手之棘輪

口頭快速拆換構造」專利案影本及其嵌掣塊與系爭案第二圖之四之一的比較圖（以下合稱引證一），證據三為七十九年三月十一日公告第一三〇六三八號「棘輪扳手之轉向調整結構」專利案影本（引證二），證據四為八十十六年七月十一日公告第三一〇六四九號「棘輪扳手止齒改良結構」專利案影本（引證三）。引證一公開日期早於系爭案申請日，係由棘輪扳手、嵌掣塊、方向調節鈕、「C」型扣環、彈簧、鋼珠、棘輪D頭、壓縮彈簧、定位鋼珠、推桿、彈復元件與定位塊等六件所組成，棘輪扳手頭部設有貫穿軸孔，嵌掣塊於面對棘輪D頭之一側設有正向與逆向棘齒，其棘輪扳手、棘輪D頭、嵌掣塊與方向調節鈕等主要構件分別相當於系爭案扳手、驅動體、換向塊、撥動裝置與控制鈕，引證一利用一方向調節鈕來連動嵌掣塊，調節鈕樞設於棘輪D頭之第一端且凸出於扳手頭部，藉調節鈕操控嵌掣塊與棘輪D頭嚙合方向之技術手段與系爭案相同，引證二棘輪扳手公開日期早於系爭案申請日，揭示一種棘輪扳手之轉向調整結構，係藉上、下片體以定位螺絲與本體結合，並將棘輪及棘輪掣塊定位於本體一端貫穿槽內，其具第一與第二齒面之棘輪掣塊，相當於系爭案的換向塊；引證三揭示公開日早於系爭案申請日，揭示一種棘輪扳手止齒結構，其具第一齒面與第二面之止回爪本體，相當系爭案的換向塊，系爭案技藝已分別見於引證一、二、三中，引證一、二、三具有高扭力之換向功效亦與系爭案相同，系爭案為熟習該項技藝人士所能輕易完成且未能增進功效，故引證一、二、三具證據力，足以證明系爭案申請專利範圍第一、二項獨立項不具進步性。另系爭

案申請專利範圍附屬項第三、四、五、六、七、八、九、十、十一、十二、十三、十四、十五項之容置空間、缺口、驅動體、換向塊、控制鈕、撥片、定位片及固定裝置等形狀特徵皆為習知技藝之簡單運用，並未增進功效，亦不具進步性。

據上論結：系爭案違反核准審定時應適用之專利法第九十八條第二項之規定，爰審定如主文。

十一、如有不服，得於本處分書送達之次日起三十日內備具訴願書正、副本（均含附件），並檢附本處分書影本經由本局向經濟部提起訴願。

局長 陳明邦

依照分層負責規定授權單位主管決行

第四頁

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